



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number: 151069

TO: Terra Gibbs  
Location: rem/2c8/2c18  
Art Unit: 1635  
Tuesday, April 19, 2005

Case Serial Number: 10/029115

From: Barb O'Bryen  
Location: Biotech-Chem Library  
Remsen 1a69  
Phone: 571-272-2518

*BOB*  
barbara.obryen@uspto.gov

### Search Notes

*Terra,*

*I tried a bunch of different changes to our standard parameters, but was not able to get the % match as high as you needed it to be.*

*Barb*

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## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: TERRA COTTA GIBBS Examiner #: 79523 Date: 4/15/05  
Art Unit: 1635 Phone Number 30 2-2058 Serial Number: 10/029/115  
Mail Box and Bldg/Room Location: Rensen Results Format Preferred (circle): PAPER DISK E-MAIL  
2C8

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Seq 1 & 2 vs AB035698  
attempt to get % match above 98%

\*\*\*\*\*  
STAFF USE ONLY

Type of Search

Vendors and cost where applicable

Searcher

ASB

.....

7

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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - nucleic search, using frame\_plus\_p2n model

Run on: April 15, 2005, 16:51:00 ; Search time 8 Seconds  
(without alignments)  
1.295 Million cell updates/sec

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Scoring table: BLOSUM62  
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Searched: 1 segs, 3888 residues

Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0  
Maximum DB seq length: 200000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

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Database : ab035698.seq.\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

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2	101	1.4	3888	1 ab035698	TOIG of: ab03569

#### ALIGNMENTS

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DEFINITION Homo sapiens mRNA for Mischapen/NIK-related kinase MINK-1, complete cds.  
ACCESSION AB035698  
VERSION AB035698.1 GI:6970477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1 (bases)

AUTHORS Dan, I., Matanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Ninomiya-Tsuji, J. and Kusumi, A.  
TITLE Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development  
JOURNAL FEBS Lett. 469 (1), 19-23 (2000)  
MEDLINE 20175403  
PUBMED 10708748  
REFERENCE 2 (bases 1 to 3888)  
AUTHORS Dan, I., Matanabe, N.M. and Kusumi, A.  
TITLE Direct Submision  
JOURNAL Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dang@bio.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2968)  
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ab035698

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; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
; REFERENCE
; 1 (bases)
; Dan.I., Watanabe.N.M., Kobayashi.T., Yamashita-Suzuki.K.,
; Pukagaya.Y., Kajikawa.B., Kimura.W.K., Nakashima.T.M.,
; Matsumoto.K., Nimomiya-Tsuji.I. and Kusum.A.
; Molecular cloning of MINK, a novel member of mammalian GCK family
; kinases, which is up-regulated during postnatal mouse cerebral
; development
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JOURNAL      FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE      20175403
PUBMED       10708748
REFERENCE    2 (bases 1 to 3888)
AUTHORS      Dan, I., Watanabe, N.M., and Kusumi, A.
TITLE        Direct Submision
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 ; AUTHORS Dan, I., Matanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K.,  
 ; Fukagaya, Y., Kajikawa, E., Kimura, M.K., Nakashima, T.M.,  
 ; Matsumoto, K., Nishimura-Tsuji, U., and Kusumi, A.  
 ; Molecular Cloning of MINK, a novel member of mammalian GCK family  
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JOURNAL      FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE      20175403
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TITLE        Direct Submission
JOURNAL      Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane
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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

# OM protein - nucleic search, using frame\_plus\_p2n model

Run on: April 19, 2005, 10:17:48 ; Search time 7 Seconds  
(without alignments)  
1.457 Million cell updates/sec

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Searched: 1 seqs, 3888 residues  
Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0  
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Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Command line parameters:  
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Database : ab035698.seq:\*  
Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

Result No.	Score	Query Match	Length DB	ID	Description
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2	5057.77	47.1	3888	1	ab035698

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DEFINITION Homo sapiens mRNA for Mismatch/NIK-related kinase MINK-1, complete cds.  
ACCESSION AB035698  
VERSION AB035698.1 GI:6970477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1 (sites)

AUTHORS Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Ninomiya-Tsuji, J., and Kusumi, A.  
TITLE Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development  
JOURNAL FEBS Lett. 469 (1), 19-23 (2000)  
MEDLINE 20175403  
PUBMED 10708748  
REFERENCE 2 (bases 1 to 3888)  
AUTHORS Dan, I., Watanabe, N.M., and Kusumi, A.  
TITLE Direct Submission  
JOURNAL Submitted (10-DEC-1999) Ippelta Dan, ERATO, Kusumi Membrane Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dangb@lo.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2968)  
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ab035698

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 1 (sites)  
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 Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Nishimura-Tsuji, J., and Kusunagi, A.  
 Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

JOURNAL FEBS Lett. 469 (1), 19-23 (2000)  
 MEDLINE 20175403  
 PUBMED 10708748  
 REFERENCE 2. (bases 1 to 3888)  
 AUTHORS Dan, I., Watanabe, N.M. and Kusumi, A.  
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 JOURNAL Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane  
 Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi  
 460-0012, Japan (E-mail: dangb@id.nagoya-u.ac.jp,  
 Tel:81-52-789-2497, Fax:81-52-789-2968)  
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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

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#### SUMMARIES

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#### ALIGNMENTS

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REFERENCE 1 (bases) 1 (sites)

#### AUTHORS

Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Nimomiya-Tsuji, J. and Kusumi, A.  
Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

#### JOURNAL

FEB 5 Lett. 469 (1), 19-23 (2000)

#### MEDLINE

20175403

#### PUBMED

10708748

#### REFERENCE

2 (bases 1 to 3888)

#### AUTHORS

Dan, I., Watanabe, N.M. and Kusumi, A.

#### TITLE

Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane

#### JOURNAL

Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi

#### FEATURES

460-0012, Japan (E-mail: dangob@nagoya-u.ac.jp,  
Tel:81-52-789-2497, Fax:81-52-789-2968)

#### source

Location/Qualifiers

#### gene

1. .3888

#### CDS

1. .3888

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 VERSION AB035698.1 GI:6970477  
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 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
 REFERENCE 1 (bases)  
 AUTHORS Dan, F., Matenabe, N. M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W. K., Nakashima, T. M., Matsumoto, K., Nishimura-Tsuji, J., and Kusumi, A.  
 TITLE Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

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JOURNAL      FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE      20175403
PUBMED       10708748
REFERENCE    2 (bases 1 to 3888)
AUTHORS      Dan, I., Matsunabe, N.M., and Kusumi, A.
TITLE        Direct Submersion
JOURNAL      Submitted (10-DEC-1999) Ippelta Dan, ERATO, Kusumi Membrane
              Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi
              460-0012, Japan (E-mail: dang@bio.nagoya-u.ac.jp,
              Tel:81-52-789-2497, Fax:81-52-789-2368)
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QY 52 --Ala-IleLysValMetAspValThrGluAspGluGluGlnIleGlnGluIle 70
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QY 106 uphe--Cys-Gly-----AlaGlySerValThrAsp--LeuValysAsnThr-Lys 121
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QY 195 Met-AlaProGlu-----ValIleAlaCysAspGluAsnProAspAlaThrTyr 211
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QY 296 -----ArgGlnValArgIle--GlnLeuLysAspHis-IleAspArgSerArgLysLys 312
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Qy 1029 -----Gly--Lys-----Val-----Tyr-----GlyLeuIleGly-- 1036
Db 1119 CTGCTGCTGTTTAAAGCTCTGAGTGTCTTATTCTTCTGCTGGA--GCCGAGAAA 1063
Qy 1037 -----ArgArgArg-----PheGln--Gln--MetAspValLeuGln--Gly--LeuAs 1050
Db 1062 CTCGCGCGAGAGTGAAGCTCTCAGGAGAGCTTCAATG--GAGCTTGGCTGCTC-- 1010
Qy 1050 nLeu--Leu-----IleThrIle--SerGlyLysArgAsnLysLeuValGlyTyr-- 1065
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Qy 1066 Tyr--LeuSerTrpLeuArgAsnLysIleLeu--HisAsnAspPro-----Glu--Val 1081
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Qy 1116 rSerValGluValTyr-----AlaTrpAla-----Pro-----LysPro--T 1128
Db 770 TTCT-----TGACTTGAGCTTGCGGAGAGGTTCCGAGAGAAATGAGAAAG--GCG 721
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Qy 1161 Tyr-Gly--SerSerAlaGlyPhe-His--AlaValAspValAsp--SerGly----- 1175
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Qy 1176 -----Asn--SerTyrAspIleTyrIlePro--ValHis-----IleGln- 1187
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Db 530 TAGAGACTACACCCCAAAATCACTAGTACCTGACCTGACAT--CTCTGACAGACAT 473
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Db 472 TCTGCCCTTGATGATGCTCATGATGACCTTGTGGCATGAGATGGCCAGACCCCTGA 413
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Qy 1219 Thr-Tyr-Gly-----Arg-Ile-IleLysAspValValLeuG 1230
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Search completed: April 19, 2005, 10:06:28  
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QY	1281	GluArgAsnAspLysValPhePheAlaSerValArgSerGlyGlySerSerGlnValTrp	1300
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RESULT 2

ab035698/c

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LOCUS AB035698 3888 bp mRNA linear PRI 18-APR-2000

DEFINITION Homo sapiens mRNA for Mshapen/NIR-related kinase MINK-1, complete cds

ACCESSION AB035698

VERSION AB035698.1 GI:6970477

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases)

AUTHORS Dan,I., Mekanabe,N.M., Kobayashi,T., Yamashita-Suzuki,K., Fukagawa,Y., Kajikawa,E., Kimura,W.K., Nakashima,T.M., Matsumoto,K., Nimomiya-Tanji,J. and Kusumi,A.

TITLE Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

JOURNAL MEDLINE  
20175403

PUBMED 10708748

REFERENCE 2 (bases 1 to 3888)

AUTHORS Dan, I., Matanabe, N.M. and Kuenmi, A.

TITLE Direct Submission

JOURNAL Submitted (10-DEC-1999) Ippelta Dan, ERATO, Kusumi Membrane Organizer Project, 5-11-13 Chiyoda, Naka-Ku, Nagoya, Aichi 460-0012, Japan (E-mail:dandbio.nagoya-u.ac.jp, Tel:81-52-789-2497, Fax:81-52-789-2568)

FEATURES Location/Qualifiers

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/db\_xref="GI:6970478"

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ORIGIN

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ab035698

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Score: 1000.00 Matches: 192

Percent Similarity: 45.66% Conservative: 486

Best Local Similarity: 12.93% Mismatches: 406

Query Match: 17.29% Indels: 409

DB: 1 Gaps: 70

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Db 3753 GAAGAGCCCCGTCGAGTGCCGCCGCTCCACAGAGCGAATCATAGCACTTCTCACCCCA 3694

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[illegible]



GenCore version 5.1.6  
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OM protein - nucleic search, using frame\_plus\_p2n model

Run on: April 19, 2005, 10:12:54 ; Search time 7 Seconds  
(without alignments)

1.457 Million cell updates/sec

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Command line parameters:

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Database: ab035698.seq\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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#### ALIGNMENTS

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LOCUS AB035698 3888 bp mRNA linear PRI 18-APR-2000  
DEFINITION Homo sapiens mRNA for Mischapen/NIK-related kinase MINK-1, complete cds.  
ACCESSION AB035698  
VERSION AB035698.1 GI:6970477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1 (bases)

#### AUTHORS

Dan, I., Watanabe, N.M., Kobayashi, T., Yamaehta-Suzuki, K., Fukagaya, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Nimomiya-Tsuji, J. and Kusumi, A.  
Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

#### JOURNAL

FEBS Lett. 469 (1), 19-23 (2000)

#### PUBMED

2 (bases 1 to 3888)

#### REFERENCE

1. Dan, I., Watanabe, N.M. and Kusumi, A.  
Submitted (10-DEC-1999) Ippelta Dan, ERATO, Kusumi Membrane

#### JOURNAL

Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dangbio.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2968)

#### FEATURES

Location/Qualifiers

#### source

1. 3888  
/organism="Homo sapiens"

#### gene

1. 3888  
/gene="MINK"

#### CDS

1. 3888  
/note="Human MINK is a conceptually translated protein using mouse MINK sequence and the human genomic clone hRPK17. H.5 from chromosome 17. Human and mouse MINK shares 97% amino acid sequence identity and all 32 exon/intron boundaries in CDS matched consensus sequences for splicing."

#### ORIGIN

1. 3888  
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#### DB

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#### Alignment Scores:

Score: 5553.90 Length: 3888 April 15, 2005 16:45 Type: N Check: 9874

#### Percent Similarity:

91.20% Matches: 1252

#### Best Local Similarity:

90.27% Mismatches: 13

#### Query Match:

96.02% Indels: 121

#### Gaps:

121



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Db 2103 GAGGAGCGACCCCTGGCTGGGAACGCTCGGACAGCGCTCTCCAGCCTCTCAAGGGGACCT 2162
QY 738 uProGlnAlaGlySerLeuGluArGAsnArGValGly----AlaSerSerLys----Leu 755
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 ? Mammalia; Eutheria; Primates; Catarrhini; Homiindae; Homo.  
 ? REFERENCE 1 (sites)  
 ? Dan,I., Watanabe,N.M., Kobayashi,T., Yamashita-Suzuki,K.,  
 ? Fukagawa,Y., Kajikawa,E., Kimura,W.K., Nakashima,T.M.,  
 ? Matsumoto,K., Nimoto,Ya-Tsui,J., and Kusumi,A.  
 ? Molecular cloning of MINK, a novel member of mammalian GCK family  
 ? kinases, which is up-regulated during postnatal mouse cerebral  
 ? development

JOURNAL EEBB Lett. 469 (1), 19-23 (2000)  
 MEDLINE 20175403  
 PUBMED 10708748  
 REFERENCE 2 (bases 1 to 3888)  
 AUTHORS Dan, I., Matanabe, N.M. and Kusumi, A.  
 TITLE Direct Submission  
 JOURNAL Submitted (10-DEC-1999) Ippelta Dan, EDATO, Kusumi Membrane  
 Organizer Project: 5-11-33 Chiyoda, Naka-Ku, Nagoya, Aichi  
 460-0012, Japan (E-mail: dangido.nagoya-u.ac.jp,  
 tel:81-52-789-2497, Fax:81-52-789-2968)  
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OY	59	hrcgu--AspGluIugluIugluIlelysgIugluIleasMetLeuylsTyrserrh	78
Db	3829	CAGAGCGGACT--GAGG--CAA--AAACAC-----CTTG--TCATTC--CG	3793
OY	78	s--HisArgasnIlealThrTyrltyrglyAlaPheIle-----LysLys--	92
Db	3792	CTCACACAGAACTTGAGCTT-----CTGACTCTCTTGTGCATGAAACCCCGTCGAGGT	3737
OY	93	SerPro---ProGlyAsnAsp--AspGluIeu---TrpLeuValMet---Glu-----Ph	107
Db	3736	GGCCCGCTCCACA---GAGCGGAT--CTCAATGGCTTT--CTCACCCAGGCCCATTA	3686
OY	107	e-----Cys-GlyAlaGlySerValThAspLeu-----VallyAsanth	120
Db	3685	TCGTGTTGAGACAGATGTAGCC--ACAGAAGTAGG--CACTCCCCCAGCTGCAGAC--	3631
OY	120	tlYsglyAsnAlaLeuylsGluAsp--CysIleAlaTyrlleCys--Arg-GluIeLe	138
Db	3630	-----CACATCTT-----AATGATGGCC--CCGTACG--TGTGACGGTAGACACCTT	3587
OY	138	uArgGlyLeu-----Ala-HisLeuHisAlaHisLys--ValIle--His-Arg-A	153
Db	3586	CG--TC--CTGTAGCACAGACAGCATCTCCATG--C--CGTGGGTGGGAGGAAATG	3534
OY	153	sp---IlelysglyGluAsnValIeu-LeuThrclyAsnIleGlu--Val-Lys-LeuVa	170
Db	3533	ATGGCAGT--GGGCGTGAT--CTGGCTTG--GATGT--GCACGGAGATGTAGTTCAT	3482
OY	170	Iasp-PheglyValSerIleGluLeuAsp--ArgThrVal-----GlyArgArgAnthrh	188
Db	3481	AGCTGTTCCC-----GAGTCGAC--ATCCACACAGATGAAG-----	3447
OY	188	eIleGlyThrPro-TyrlTrp---MetAlaProGluValIleAla---CysAspGluasn	205
Db	3446	-----CCAGACACTGCAGCCATCGAT--GACC--TTGACCCTGCTG-----	3411
OY	206	ProAspAlaThrTyrltyr--AspTyArg--SerAsp-Ile-Trp--SerleuGlyIleth	222
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OY	222	rAlaIleGluMetAlaGluIlyAlaProProLeuCys-----AspMetHis--ProMet	240
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OY	240	rgAlaLeuPhe-----LeuIleProArg--Asn--ProPro-----Pro--	251
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OY	252	ArgLeu-----Lys--SerLys-----LysTrpSerLysLys	261
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OY	262	--Phe--IleAspPhe-----IleAspThrCys--LeuIleIysThrTyrlLeuSera	277
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[illegible][illegible]

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QY      983 GAlAHISerGln-----ThrPro-GluIle---ArgLys-Tyr----- 994
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QY      995 -Lys-----LysArg-----Phe-Asn-SerGln-Ile-----Leu-----CysA 1005
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QY      1005 LAlAlaLeu-TyrGlyValAsnLeu---LeuValGlyThrGluAsnGlyLeuMetLeuLeu 1023
Db      1276 --G-CTCCTTC-CTGCAGCTTCGGCTGCTCCGC--TCCG-CGCGTGTGCTCTC 1225
QY      1024 AspArgSerGlyGlnGly-Lys-Val-TyrGlyLeuIle---Gly-Arg---Arg--- 1038
Db      1224 CA-CGC-----GGCGCGCTCTCTCTCTG-CTCCTATGCGCGCGCTGCGCTG 1176
QY      1039 ---Arg-PheGln-----Gln-MetAsp-----ValLeuGlnGlyLeuA 1050
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QY      1119 GluVal-Tyr-----AlaTyr---AlaPro-----Lys 1126
Db      936 ---CTTCTTCCGGATCGGTCAATGTGCTCTTAAGCTGATCGGACCTGCGCTCCGT 880
QY      1127 ---Pro-----Tyr----- 1128
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QY      1129 ---His-----Lys-----PheMetAla---Phe----- 1134
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QY      1135 ---Lys-SerPhe-----AlaAsp-Leu-----ProHi 1142
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QY      1158 --LysValIleTyr-----GlySerSerAlaGlyPhe---His----- 1168
Db      651 CCAAA-----TATCACTCTCTGATCATATGATG--GCATCAGGCTTTCATACACAGCG 600
QY      1169 ---AlaValAsp-ValAspSerGlyAsn-SerTyrAsp-IleTyr---IlePro--- 1183
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QY      1198 ---LeuPro---Asn---Thr---Asp-----GlyMetGluMet 1206
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QY      1207 ---Leu-----Leu---Cys---TyrGluAspGlnGlyValTyr-ValAsnThr 1219
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QY      1220 Tyr-GlyArg---IleIle-----LysAspVal-Val-----L 1229
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QY      1229 euGln-----TyrGlyLysMetProThrSerValAlaTyrIle----- 1241
Db      317 TCCATCACACAGCAGAGCTGATCATGCTTCCCGGGGGCTC---TTCCTGATGAAAGCT 261
QY      1242 ---CysSerAsnGlnIleMetGlyTyrGlyGluValAlaIleGluI 1256
Db      260 CCGTAGTAGTGGCGATGTT--G-CGG-----TGGT--G--AGA--GTA--CT 224
QY      1256 e---ArgSerValGluThrGlyHisLeu-----AspGlyValPheMetHisLys---A 1272
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QY      1272 rGAla---Gln---Arg-----Leu---LysPheLeu---CysGluArgAsnA 1284
Db      176 GTGACATCATCATCCTTGATGGCAGCAGCTGCCCCCTC--TTGACATGC---CGAGCC- 123
QY      1284 sPlyValPhePheHisAserValArgSerGlyLysSerGlnValTyr-Phe----- 1301
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QY      1302 ---Met-Thr-Leu---Asn-----Arg---Asn-----Cys-Ile 1309
Db      90 CACCTCCACAACTCAAAATCCAGACAGGATCCCGCGAGGGCGGACAGGTGATGCTGTC 31
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Db      30 CAGCTGCGGCGGCGGCTGCG 10

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Search completed: April 19, 2005, 10:13:39  
 Job time : 44 secs

GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - nucleic search, using frame\_plus\_p2n model

Run on: April 19, 2005, 10:19:23 ; Search time 8 Seconds

(without alignments)  
1.275 Million cell updates/sec

Title: US-10-029-115-2

Perfect score: 13011

Sequence: 1 MODPARSLDIDLSALRD.....SGSSQVYFMTLNRCINMW 1312

Scoring table:

BLOSUM100	Xgapop 0.1, Xgapext 0.0
Ygapop 0.1, Ygapext 0.0	
Fgapop 0.1, Fgapext 0.0	
Delop 0.1, Delext 0.0	

Searched: 1 segs, 3888 residues

Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Command line parameters:  
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-SUFFIX=ptc -OUT=aag.res -MINMATCH=0.1 -LOOPCL=0 -LOPEXT=0 -UNITS=bits  
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-NORExt -HEAPSIZ=500 -MINLEN=0 -MAXLEN=200000000 -NCPU=6 -NO\_XLPHY  
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Database : ab035698.seq:\*  
Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	6318.66	48.6	3888	1	ab035698
					TOIG of: ab035698

## ALIGNMENTS

RESULT 1  
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TOIG of: ab035698 check: 9874 from: 1 to: 3888

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DEFINITION Homo sapiens mRNA for Mischapen/NIK-related kinase MINK-1, complete cds.  
ACCESSION AB035698  
VERSION AB035698.1 GI:6970477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1 (bases) Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## AUTHORS

Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagaya, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Nimomiya-Tanji, J., and Kusumi, A.  
Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development  
FEBS Lett. 469 (1), 19-23 (2000)

## JOURNAL

MEDLINE  
20175403

## MEDLINE

10708748

## REFERENCE

2 (bases 1 to 3888)

## AUTHORS

Dan, I., Watanabe, N.M., and Kusumi, A.

## TITLE

Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane  
Direct Submission  
Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi  
460-0012, Japan (E-mail: dangobio.nagoya-u.ac.jp,  
Tel:81-81-52-789-2497, Fax:81-52-789-2968)

## JOURNAL

Location/Qualifiers

## FEATURES

1. .3888

## source

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/gene="MINK"

1. .3888

/gene="MINK"

1. .3888

/note="Human MINK is a conceptually translated protein  
using mouse MINK sequence and the human genomic clone  
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for splicing."

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## ORIGIN

AB035698 Length: 3888 April 15, 2005 16:45 Type: N Check: 9874 ..  
ab035698

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Percent Similarity:	92.65%	Conservative:	2
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US-10-029-115-2 (1-1312) x ab035698 (1-3888)

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RESULT 2  
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 / Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.  
 / 1 (sites)  
 / REFERENCE  
 / Dan, I., Watanabe, N. M., Kobayashi, T., Yamashita-Suzuki, K.,  
 / Fukagaya, Y., Kajikawa, E., Kimura, W. K., Nakaishima, T. M.,  
 / Matsumoto, K., Niimoriya-Tsuiji, J., and Kusumi, A.  
 / Molecular cloning of MINK, a novel member of mammalian GCK family  
 / kinases, which is up-regulated during postnatal mouse cerebral  
 / development



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 DB 2775 AGG-CTGGT--AGAT--CC-CT--AGATCCACAAACATCGTG--AAC--GAGCTCTT 2731  
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 QY 561 -----ProLeuSer-GlnThr-----ProPro-----MetGln-Arg-- 570  
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 QY 615 AlaValIleArgGlnAsnSerAsp--ProThrSerGlu-GlyProGlyProSerProAsp 634  
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 DB 2403 CTCTCT-----GCTGCTCT--CACT--GCTTTCACCT-----CTT--CGCTG 2367  
 QY 652 -----ThrSer--SerIleAlaThrAlaLeuAsnThrSer-GlyAlaGly-----Gly---- 666  
 DB 2366 GACGACGAGTATCCATGCGCT-----TCTTGGGA--GGCCGAGGGGCTTC 2323  
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 DB 2157 CCGTGAGAGCGGTGAGAGACGCTGTCCAGCGTTCC-----AGCCAGGCTCCCT-CC 2105  
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; AUTHORS Dan, I., Watanabe, N.M. and Kusumi, A.

121 AAGGTCGGCATGTCAGACGGGGCAGCTGGCTGCCATCAAGTTCATGGATGTCACGGAG 180

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OY	1267	CTGACGAGAGAGAGACACAGCGGCGCTGAGAGCATGCAAGCTCTTCGCGGGAGAG	1326
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QY	1327	GAGCGGCGGCGAGGCGGAGCGTGAACAGAAATACAGCGGAAGCAGCTGGAGAGCAGACGG	1386
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RESULT 2

ab035698/c

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LOCUS AB035698 3888 bp mRNA linear PRI 18-APR-2000

DEFINITION Homo sapiens mRNA for Mshapen/NIK-related kinase MINK-1, complete cds.

ACCESSION AB035698

VERSION AB035698.1 GI:6970477

KEYWORDS

SOURCE

ORGANISM Homo sapiens (human)

REFERENCE

1. Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo. (sites)

2. Dan, I., Matanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukugaya, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Ninomiya-Tsuji, J. and Kusumi, A. Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development

3. JOURNAL FEBS Lett. 469 (1), 19-23 (2000)

4. MEDLINE 20175403

5. PUBMED 10708748

6. REFERENCES 2 (bases 1 to 3888)

7. AUTHORS Dan, I., Matanabe, N.M. and Kusumi, A.

8. TITLE Direct Submission

9. JOURNAL Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project, 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dang@bjo.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2968)

10. FEATURES

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Search completed: April 19, 2005, 09:58:47  
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TITLE	Direct Submission
JOURNAL	Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project; 5-11-93 Chiyoda, Naka-ku, Nagoya, Aichi 460-0002, Japan (E-mail: dani@ribi.riken.go.jp)

## FEATURES

**gene**

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RIGIN

AB035698

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unblasion  
 d (10-DEC-1999) Ippita Dan, ERATO, Kusuni Membrane  
 r Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi  
 , Japan [E-mail: dang@bio.nagoya-u.ac.jp,  
 2-789-2497, Fax: 81-52-789-2968]  
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Qy	307	CTCTGGCTGTGTGTATGTGAGTTCTGTGTGTCTGTGTTCACTGTGACTGTCTGTAAAGAACCA		366
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Qy	367	AAAGGCAACGCCCTGAAGAGGACTGTATGCGCTTATCTGACAGGGAATCTTCAGGAGT		425
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Db	481	CTGACAGAGAAATGCTGAGGTCAAGCTATGTGATTTTGGGGTGTAGTGTCTCACTGTGACCG		540
Qy	547	ACCGTGGGACAGCGSAAACCTTCAATTGGGACTCCCTACTGGATGGCTCCAGAGGTCACT		605
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Qy	667	ATCAACGCCATGAGATGGCAGAGGGAAGCCCCCTCTGTGTGACATGACCCCATGTGGA		726
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Qy	727	GCCCTCTTCCTCATTCCTCGSAAACCTCGGCCAGGCTCAAGTCCAAAGTGGCTTAG		785
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Db	781	AAGTTCATTGACTTTCATTGACACATGTCTCATCAAGACTTACCTGAGCGGCCCAACCCACG		840
Qy	847	GAGCAGCTACTGAAAGTTTCCTTCATTCGGGACCAAGCCCAAGGACGGCAGAGTCCGCATC		906
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Qy	1027	TCATCATGAACGTGCTGTGAGAGTGCACCTGACGCGCGGAGTTTCTCCGCTCCAGCAG		1088
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Qy	1087	GAATAATGAGCAATTCAGAGGCTTAAACAGCAGCAGCAGCTGCAACACAGACAGACAG		1146
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Qy	1147	CGAGACCCCGAGGCAACATCAACCTGCTGCACAGCGGACGCGCATAGAGAG		1206
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Qy	1207	CAGAAAGAGAGACGGCGCTCGCTGTGAGAGCAACAGCGCGGAGCGGAGCAACGCGAAG		1266
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QY	1387	CAGTCAGAACTCTTCAGAGGACAGCTCAGCAGGAGCATCGTCACTCAAGTCCCTCAG	1446
Db	1381	CAGTCAGAACTCTTCAGAGGACAGCTCAGCAGGAGCATGCTCTACTCAAGTCCCTCAG	1440
QY	1447	CAGCAGCAACAGCAGCAGCAGCTTTCAAGAAACAGCAGCAGCAGCAGCTTCCTGTGGGAC	1506
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Db	1501	AGAAAGCCCTCTATCCATTATATGTGTGGGGCATGTAAATCCCGCTGACAAACCAAGCTGGGAC	1560
QY	1567	CGAGAGGTAGAAAGAGAGAACAAAGGATATACAGAGCAGAGAACTCTCCCTTGTGGCAAGC	1626
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 REFERENCE 1 (bases)  
 Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita, S., K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Niimiya-Tsuji, J., and Kusumi, A.  
 Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development  
 JOURNAL FEBS Lett. 469 (1), 19-23 (2000)  
 MEDLINE 20175403  
 PUBMED 10708748  
 REFERENCE 2 (bases 1 to 3888)  
 Dan, I., Watanabe, N.M., and Kusumi, A.  
 Direct Submision  
 JOURNAL Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dan@bio.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2968)

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DB 703 CACACAGAGGGGGGGGCTCCCTCTGC--CATCT--CGATGGCTGTGATTCCTAGACCA 649
OY 3314 AATA-----CGAGCGG--AT--TAACT-----TCTGG-----TCATC-----GC-----CCTC 3348
DB 648 AATATCATCT--CTGTAATCATAGTGGCATCAGGTTCTCATACAGGCGATGACCTC 592
OY 3349 AAGAGC--TCC-GT--GGAG-----GTGTAT--GCCTGGGCC-----C 3380
DB 591 TGAAGCATCTCAGTAGGAGATCCCATGAAGGT--TCCGTCT--GCCACGSGTGGGTC 535
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DB 534 CAGCTGAGCATCTCACCCCAAAATCCATGACTTGACC--TCAGCATCTCTGTGACGACA 476
OY 3423 C---CTCCCC--ACGGCCTCT-GCTGG-TGACCT-----GACAGTAGAGAGGGGCA 3470
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OY 3471 G-CGGCTCAAGGTCAATC-----TAT--GGC--TCCAGTGTGGCTTCCA-----TGC 3512
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OY 3513 ---TGTG-----GAT--GTGACTGGGGAA-CAGCTATGACATCTACA---T 3551
DB 364 CTTTGTGTCTTTTACAGGTCACT-ACT---GAACGAG---AC--C-ACAGAACT 317
OY 3552 CCTGTGCAATCCAGAGCATCAAGCCCATGCAATC-TTCTTCCCAACACCG 3610
DB 316 CCAAT-----CA-CC-AGCCAG--GC---TG--GTATGTT--TCC-----286
OY 3611 ACGGCATGAGATGTGTGTCTACAGAGACGAGGGGTGTCTACGTCAACAGTACG-GG 3669
DB 285 -CGG--GG-G--GCT-CT-T-CT-TGATGA--AGG---CTCCGT---A-GTAGTGG 248
OY 3670 CCGATCATTAAGATGTGTGTCTGCAAGTGGGGGAGATGCTACTT-----C-TGTG- 3721
DB 247 C-----GATGT-----TGCGTGTGTAGAG-----TACTTTTCAGCATGTGA 209
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OY 3755 GTAGAAAGCCA-----TTGAGAT-CCG-CTCTGTGAGACGGGCACTCGAC 3801

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DB 109 CGTAGGT-TCCATTTGC-C-GACCACTCCACAAAGCTCAAGATCCAGCAGGGTCCCGCA 53
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Search completed: April 19, 2005, 09:52:20  
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Db	181	AACGAGGAGGAAGAGATCAAAACGAGATCAACATGCTGAAGAAAAGTACTCTCAACACCGC	240
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Db	241	AAACATGCCACCTTACTACGAGACCTTCAATCAAGAAAGACCCCCCGGGAAGAGATGACCG	300
OY	307	CTCTGGCTGTGTGATGTGAGATTCTGTGTGTCTGTGTTCAAGTACCTGACTGTGTAAAGAACCA	366
Db	301	CTCTGGCTGTGTGATGTGAGATTCTGTGTGTCTGTGTTCAAGTACCTGACTGTGTAAAGAACCA	360
OY	367	AAAGGCACAGCCCTTGAGAGAGAGACTGTATTCGCTTATCTCGAAGGGAATCCTCAGAGGT	426
Db	361	AAAGGCACAGCCCTTGAGAGAGAGACTGTATTCGCTTATCTCGAAGGGAATCCTCAGAGGT	420
OY	427	CTGGCCCATCTTCATCATGCCCAACAGGTGATTCATCGAGACATCAAGAGGAGCAGAAATGTCTG	486
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OY	487	CTGACAGAGAAATGCTGAGGTCAAGCTAGTGAATTTTGGGGTGAAGTCTCAGCTGAGACCGC	546
Db	481	CTGACAGAGAAATGCTGAGGTCAAGCTAGTGAATTTTGGGGTGAAGTCTCAGCTGAGACCGC	540
OY	547	ACCGTGGGACAGCGGAAACCTTCAATTTGGGACTCCCTCACTGGATATGGCTCAAGAGTCAATC	606
Db	541	ACCGTGGGACAGCGGAAACCTTCAATTTGGGACTCCCTCACTGGATATGGCTCAAGAGTCAATC	600
OY	607	GCCCTGTGATGAAACCCGTGATGCCACCTATGATTTACAGAGTGAATATTTGGTCTCTAGGA	666
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OY	907	CAGCTTAAGGACCAATTTGACCCGAGGAAGACGGGGGTGAGAAAGAGAGACACAA	966
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Db	961	TATGAGTACAGCGGACGAGGAGAGAGAAATGACCACTGAGAGAGAGAGAGCCCAAGC	1020
OY	1027	TTCATCATGAACGTGCTCTGAGAGTGCATCTTACGCCCGGAGATTCTCCGCTCCACAG	1086
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OY	1207	CAGAAAGAGAGACGGCGCCGCTGTGAGAGCAACAGCGCGGAGACGGGACACGCGGAAG	1266
Db	1201	CAGAAAGAGAGACGGCGCCGCTGTGAGAGCAACAGCGCGGAGACGGGACACGCGGAAG	1260
OY	1267	CTGACAGAGAGAGACAGCAGCGCGGCTGAGAGACATGCAAGCTCTGCGGCGGAGAG	1326
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QY	1387	CAGTCAGAACCTCTCCAGAGGACAGCTCAGCAGAGAGCATGCTCTCAAGTCCCTCAG	1446
Db	1381	CAGTCAGAACCTCTCCAGAGGACAGCTCAGCAGAGAGCATGCTCTCAAGTCCCTCAG	1440
QY	1447	CAGCAGCAACAGCAGCAGCAGCTTCAGAAACAGCAGCAGCAGCAGCTTCCTGGCGGAC	1506
Db	1441	CAGCAGCAACAGCAGCAGCAGCTTCAGAAACAGCAGCAGCAGCAGCTTCCTGGCGGAC	1500
QY	1507	AGGAAGCCCTCTGTACATTAATGTCGGGGGACGTAAATCCCGCTGCAAAACAGCTGGGACC	1566
Db	1501	AGGAAGCCCTCTGTACATTAATGTCGGGGGACGTAAATCCCGCTGCAAAACAGCTGGGACC	1560
QY	1567	CGAGAGGTAGAAGAGAAACAAGATGAAACAAGCAGAGAACTCTCCCTTGGCCAAAGC	1626
Db	1561	CGAGAGGTAGAAGAGAAACAAGATGAAACAAGCAGAGAACTCTCCCTTGGCCAAAGC	1620
QY	1627	AAGCAGGACACACAGGGGCTGAACTCCCGACGCTCCCGAGGCGCCCGCCACGA	1686
Db	1621	AAGCAGGACACACAGGGGCTGAACTCCCGACGCTCCCGAGGCGCCCGCCACGA	1680
QY	1687	CCCGCTTCCAGACTCTCTCTATGACAGAGCGGTGAGGCCCGCAGAGGAGCGCACAA--	1744
Db	1681	CCCGCTTCCAGACTCTCTCTATGACAGAGCGGTGAGGCCCGCAGAGGAGCGCACAAAG	1740
QY	1745	-----AG 1746	
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2527 GACAGCGTCAGCAGCAGTGTGTCCAGCAGTGTGAGAGATCAACCGAGCCAGCCCA 2586
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DEFINITION Homo sapiens mRNA for Mishapen/NIK-related kinase MINK-1, complete cds.
ACCESSION AB035698
VERSION AB035698.1 GI:6970477
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
REFERENCE
1 (bases 1 to 3888)
Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita, S., K.,
Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M.,
Matsumoto, K., Niimiya-Tsuji, J., and Kusumi, A.
Molecular cloning of MINK, a novel member of mammalian GCK family
kinases, which is up-regulated during postnatal mouse cerebral
development
JOURNAL FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE 20175403
PUBMED 10708748
REFERENCE
2 (bases 1 to 3888)
Dan, I., Watanabe, N.M., and Kusumi, A.
Direct Substitution
Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane
Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi
460-0012, Japan (E-mail: dan@bio.nagoya-u.ac.jp,
Tel: 81-52-789-2497, Fax: 81-52-789-2966)
FEATURES
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Db	301	CTCTGCGCTGCTGATGAGATTCTGTGCTGCTGCTTCACTGATCTGACTGTGTAAAGACCA	360
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Db	361	AAAGGCAACGCCCTGGAAGAGGACTGTATCGCCCTATATCTCGACGGAGATCTCTGAGGGT	420
Qy	427	CTGGCCCATCTCCATGCCCACAAAGGTGATCCATGAGACATCAAGGGGAGAAATGTGCTG	486
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Qy	607	GCCCTGTGTAGAAACCCCTGATGCCACTATGATTTACAGAGTGAATTTGGTCTCTAGGA	666
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Qy	787	AAGTTTCATTTGACTTCATTGACACATATGTCATCTCAAGACTTACCTGAGCCGCCACCCACG	846
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Qy	847	GAGCAGCTACTGAAAGTTTCCCTTCATCCGGGACCAAGCCACGAGCCGAGGTCCGATC	906
Db	841	GAGCAGCTACTGAAAGTTTCCCTTCATCCGGGACCAAGCCACGAGCCGAGGTCCGATC	900
Qy	907	CAGCTTAAAGGACCAATTGACCGATCCCGGAAAGAGCGGGGTGGAAGAAAGAGACACGAA	966
Db	901	CAGCTTAAAGGACCAATTGACCGATCCCGGAAAGAGCGGGGTGGAAGAAAGAGACACGAA	960
Qy	967	TATGAGTACACGCGACGCGAGGAGGAAATGACACGCTATGAGAGGAAGAGAGCCAAAGC	1026
Db	961	TATGAGTACACGCGCGACGCGAGGAGGAAATGACACGCTATGAGAGGAAGAGAGCCAAAGC	1020
Qy	1027	TTCATCATGAACGTGCTGAGAGTGCATCTTACGCCCGGAGATTTCCTCGGCTCCAGCAG	1086
Db	1021	TTCATCATGAACGTGCTGAGAGTGCATCTTACGCCCGGAGATTTCCTCGGCTCCAGCAG	1080
Qy	1087	GAATAATAAGACCACTCAGAGGCTTTTAAACAGACGACGACGCTGTACACACACACGAG	1146
Db	1081	GAATAATAAGACCACTCAGAGGCTTTTAAACAGACGACGACGCTGTACACACACACGAG	1140
Qy	1147	CGAGACCCCGAGGACCATCAATAAACACTTGCTGACACGACGCGACGCGCATATGAGGAG	1206
Db	1141	CGAGACCCCGAGGACCATCAATAAACACTTGCTGACACGACGCGACGCGCATATGAGGAG	1200
Qy	1207	CAGAAAGAGAGCGGCGCGCTGTGAGGAGCAACGCGGCGGAGCCGAGACAGCGGAG	1266
Db	1201	CAGAAAGAGAGCGGCGCGCTGTGAGGAGCAACGCGGCGGAGCCGAGACAGCGGAG	1260
Qy	1267	CTGCAAGAGAAAGAGACAGACAGTGGCGGCTGTGAGGACATGCAAGCTCTTCGCGCGGAGGAG	1326
Db	1261	CTGCAAGAGAAAGAGACAGACAGTGGCGGCTGTGAGGACATGCAAGCTCTTCGCGCGGAGGAG	1320

QY	1327	GAGCGCGCGGACGGCGGAGCGCTGAGCAGGAATATCAAGGGAAAGCAAGCTGAGAGACAGCGG	1386
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QY	1387	CAGCTCAGAACCTCTTCACAGAGGCAAGCTCAGCAGAGAGCATGCTCAAGTCCCTGACG	1446
Db	1381	CAGTCAAGACGTCTCCAGAGGCAAGCTCAGAGAGAGCATGCTCAAGTCCCTGACG	1440
QY	1447	CAGCAGCAACAGCAGCAGCAGAGCTTCAGAAACAGCAGCAGCAGAGCTTCCTGCGGAGAC	1506
Db	1441	CAGCAGCAACAGCAGCAGCAGAGCTTCAGAAACAGCAGCAGCAGAGCTTCCTGCGGAGAC	1500
QY	1507	AGGAAGCCCCCTGTATCAATTATGTCGGGAGCATGAATCCCGCTGACAAACAGCTCGGAGC	1566
Db	1501	AGGAAGCCCCCTGTATCAATTATGTCGGGAGCATGAATCCCGCTGACAAACAGCTCGGAGC	1560
QY	1567	CGAAGAGTAGAAGAGAGAACAGAGATGAACAGCAGCAGAACTTCTCCCTTGCCAGAGC	1626
Db	1561	CGAAGAGTAGAAGAGAGAACAGAGATGAACAGCAGCAGAACTTCTCCCTTGCCAGAGC	1620
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QY	1745	-----AG	1746
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QY	1747	TCCCTGCAGACACAGCCCAACCGAAACCTGGCTCCTTCAGGCTCCCAATGACCCGAC	1806
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QY	1807	CCTGCCATCCCGGACCCCATCTGCCACGCGCCCAAGTGCCTCGAGAGGTGTATCCGCAGAT	1866
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QY	1927	GATTAACGAGGCGCCCAACCAAGTGCCTCAGAGACCTCATCTATCGCACCTGCCCTTAAC	1986
Db	1981	GATTAACGAGGCGCCCAACCAAGTGCCTCAGAGACCTCATCTATCGCACCTGCCCTTAAC	2040
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Db	2041	ACCAAGTGGGGCGGAGGGTCCCGGCCAGCCCAAGCAATTCGTGTC-----	2085
QY	2047	TCCGCTTGCAAAATCTATCTGCAAAAGCGGCAAGCGGGCACCCCAAGCTCCAGGG	2106
Db	2086	-----	2085
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Db	2086	-----AGTAAACCCCGACCTTCAGAGAGAC	2109
QY	2167	GACCTGTGGAGAAACGTGTGGACAGAGGTCTTCACAGCTCTCAAGGAGACCTGCCAG	2226
Db	2110	GACCTGTGGAGAAACGTGTGGACAGAGGTCTTCACAGCTCTCAAGGAGACCTGCCAG	2169
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Db	2170	GCTGGCTCACTGAGCGGAAACCGGTGGAGATCTCTTCAAAACCGGACAGCTCCCTGTG	2229
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D	b		3370	CCCAACGCCCTCTGCTGTGGTGAAGTAGAAGAGAGGGGCGCAGGGCTCAAGGCATC	3429
O	y		3487	TATGGCTCAGTGCTGCTTCCTCATGCTGTGATGTGACTCGGGGAAACGCTATGACATC	3546
D	b		3430	TATGGCTCAGTGCTGCTTCCTCATGCTGTGATGTGACTCGGGGAAACGCTATGACATC	3489
O	y		3547	TACATCCCCTGGACATCCAGAAGCCAGATCACGCCCAATGCCATCATCTTCTCCCCAAC	3606
D	b		3490	TACATCCCCTGGACATCCAGAAGCCAGATCACGCCCAATGCCATCATCTTCTCCCCAAC	3549
O	y		3607	ACCAGCGCATGAGAGATCGTGTGTCTACAGAGACGAGGGGTGTCTACGTCAACAAGTAC	3666
D	b		3550	ACCAGCGCATGAGAGATCGTGTGTCTACAGAGACGAGGGGTGTCTACGTCAACAAGTAC	3609
O	y		3667	GAGCGCATATTAAAGATGTGGTGTGTCAGATGGGGGAGAGATCCCTAATTCTGTGGCTTAC	3726
D	b		3610	GAGCGCATATTAAAGATGTGGTGTGTCAGATGGGGGAGAGATCCCTAATTCTGTGGCTTAC	3669
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D	b		3670	ATCTGCTCCAAACCAATATAAGGGCTGGGGGTGAGAAAAGCATTGAGATCCGCTCTGGGAG	3729
O	y		3787	ACGGGCGCATCTCGACGGGGCTTTTCATGACAAACAGAGCTCAGAGGCTCAAGTTCTGTGT	3846
D	b		3730	ACGGGCGCATCTCGACGGGGCTTTTCATGACAAACAGAGCTCAGAGGCTCAAGTTCTGTGT	3789
O	y		3847	GAGCGGAATGACAAAGGTGTTTTTTCCTCAGTCCGCTCTGGGGGAGACAGCAAGTTTAC	3906
D	b		3790	GAGCGGAATGACAAAGGTGTTTTTTCCTCAGTCCGCTCTGGGGGAGACAGCAAGTTTAC	3849
O	y		3907	TTCATGACTCTGGAACCGTAACCTGATCATGAACTGTGTGA	3945
D	b		3850	TYCATGACTCTGGAACCGTAACCTGATCATGAACTGTGTGA	3888
 RESULT 2 ad035698/c TOIG of: ab035698 check: 9874 From: 1 to: 3888					
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D	e	finition	Homo sapiens mRNA for Mishapen,NIR-related kinase MINK-1, complete cds.		
A	c	cession	AB035698		
V	ersion		AB035698.1 GI:6970477		
K	eywords				
S	ource		Homo sapiens (human)		
O	rganism		Homo sapiens		
R	eference		Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo. 1 (bases)		
A	uthors		Fukagaya,Y., Kajikawa,E., Kimura,W.K., Nakashima,T.M., Matsumoto,K., Ninomiya-Tsuji,J. and Kusumi,A.		
T	itle		Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development		
J	ournal		FEBS Lett. 469 (1), 19-23 (2000)		
M	edline		20175403		
P	ubmed		10708748		
R	eference		2 (bases 1 to 3888)		
A	uthors		Dan,I., Watanabe,N.M. and Kusumi,A.		
T	itle		Direct Submision		
J	ournal		Submitted (10-DEC-1999) Ippseita Dan, ERATO, Kusumi Membrane Organizer Project, 5-11-33 Chiyoada, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail:dang@bio.nagoya-u.ac.jp, Tel:81-52-789-2497, Fax:81-52-789-2968)		
F	eatures		Location/Qualifiers		
S	ource		1..3888		
/	organism=	"Homo sapiens"			
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/	chromosome=	"17"			



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 QY 1635 CAGCAGGGGGCTGAGAGCCCCCATATCCCAAGGCTTCCCAAGGGCCCCCA-GAAGCCCTTT 1693  
 Db 2586 CAGCA-GGTTTC--GCTCCTTT---CAGGGGTGCGTGAACACATGG-----T 2542  
 QY 1694 CCCAGACTCTCTCTATGACAGAGCCGGTGGAGCCCCAGAGAGGA-CCGAC-AAGTCCCT 1751  
 Db 2541 GCC-G-C-CCCCGTAG--GGGGC---TGG-CTCC--G-TGATCTCTCCAGCTC--- 2497  
 QY 1752 GCAGAGCCAGCCCA---CCCGAAC-CTGGCTGCTTCCAGC-CTCCATGACCCCGA 1805  
 Db 2496 G-TGAGCCA--CATGATGCTG--ACGATGTGTATATCCCATCGCTGC--GGCCCC-- 2447  
 QY 1806 CCTGTGCAATCCCGC-ACCCTATGCCAGCCCGCATGTCGCCAGAGAGCTGTATCCGCA 1864  
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 QY 1865 ATTCAAGACCCCACTGTGAAGGACTGGCCCGCAGCCGATCCCGAGCTGGGGTCC--G 1922  
 Db 2396 --TC-GTCTCATGCTTT-CCACTT--CTTC-GCTGGA--GACGAG--T-AGTCCATG 2349  
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 QY 2157 CAGGAGGA-GGCAACCT---GGCTGG--GAACGCTCGAC-AGCTCTTCCAGCTCT 2208  
 Db 2167 --GGGGGAGGTGCGGTGAGAGGCTGGAAGAGCGCT-GTCCGAGCT--TCCAGC---- 2117  
 QY 2209 CAGCG--GCACCTCCCGCAGG--CTGGCTACTGAGACGGAGACCGGTGGAGCTCTCTC 2265  
 Db 2116 CAGGGTCTCTCT-CTGAGGTGGGGTTACTGACAG-ACGTCTGGG---CT--GGC 2064  
 QY 2266 AACTGACAGCTCCCTGTGCTCTCCCTGGGAATAAGCA--AG--CCGACAGCA 2321  
 Db 2063 ---CGGAC-CTTC--G-GC-C-CCACTGTGTTAAGGCAATGATGATGAT 2014  
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QY 2610 CCAGGCAACCCCT-----GAAGAGAGC---GGACC-TGCTGAT-GCTGAC----AGCA 2656  
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 Db 1452 CTGTGTGTGTCTGAGGAGCTTAGAGAGCATGCTGTGTGTGTGAGCT-GCTG 1394  
 QY 2873 ---GTGAGAGGGCACTGGCTGACACAGCTGACATGACGTGAGAAAGTCTT-GTG 2928  
 Db 1393 GAGTGTGACTGC-CGCTGCTCTCAAGTGC-TTCCG-CTT--GTATCTGCTGCGG 1339  
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 Db 1338 CTCCGCTGCGCGCTCTCTCTCCG---CCGCA--GAG--CCTGATGTCC---T 1292  
 QY 2987 ACAGAG--CGATTAACCTCCGAGATCTGTGTGAGCCCTTGGGGGTCAACCTGCTG 3045  
 Db 1291 -CAGCCCGCTGTCTCTC---TTCTC-CTGAGC---TT-----CC-GCTG 1252  
 QY 3046 GTGGACAGAGAGAGGGCTGATGTGTGACCGAGTGG-GCAGGGCAAGTGTATG- 3103  
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 QY 3104 GACTATTTGGGGGC-GAGCT--TCCAGCAGATG---GATGTG---CTGAGGGGCTCA 3154  
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 QY 3155 AC--CTGCT-CATCAACATCT-CAG--G--G---AAAGGAAC-AACTGCGGGTAT 3202  
 Db 1141 GT 1083  
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 Db 851 AGTACTGTCT 794  
 QY 3436 CCTC--TG--C-TGGTGAAC-----T-GACAGTGAAGAGGGGACGGCT--CAAG 3481  
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 QY 3482 TCACTATGCTTCAAGTCTGCTTCAATGCTGTGATGTGACTC---GGGAAAC-AG 3536  
 Db 735 -AAT-GA-GG---AAGAG--GGCTGCAATGGGGTCAAGTCA-ACACAGAGGGGGCTCC 685

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Db 626 GTGGCATCAGGGTTCTCATC-ACAGGCGATGACCTCTGAGCCATCCAGTAGGGAGTCCC 568
OY 3638 AGGACGAGGGTGTCTACGTC--AACAC-GTACGGGGCATCATTAAGATGTGTGC--- 3691
Db 567 A--ATGAAAGTGT-TCCGTCTGCCCAAGGTGCGGTC-CAGC--TGAGCA-CTCACCCTCAA 515
OY 3692 --TGCAGTGGGGGAGAT--GCCTACTTCTGT-GGC--CTACA-TCTGTCCAACAGAT 3743
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OY 3744 AATGGCTGGGGTGAAGAAAGCCATTGATCCGCTCTGTGAGACGGGCC--ACCTC-GA 3800
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Db 312 CAC-C--AGCCAGAGCTGGTCACTGTTCCCGG-G---GGGC 278
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Search completed: April 19, 2005, 09:57:37  
Job time : 25 secs

; AUTHORS Dan, I., Watanabe, N.M. and Kusumi, A.

1

[illegible]

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QY	1567	CGAAGAGTAAAGAGAGAAACAAAGGATGAACAAGAGAGAACTCTCCCTTGGCCAAAGC	1626
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Db	1621	AAGCCAGGCAACAGCGGGGCTGTAGCCCCCATATCCCAAGGCTTCCCAAGGGCCCCCAGA	1680
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Db	2086	----- 2085	
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Dd	3670	ATCTGCTCAAACCAATATATGSGGCTGGGGTGAAGAAAGCATTTGAATCCGCTCTGTGGAG
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Dd	3730	ACGGGCACTCGACGGGGTCTTACATGACAACAGAGCTCAGAGGCTCAAGTTCTCGTGT
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Dd	3790	GAGCGGAATGACAAGGTGTTTTTTTGCTCAGTCCGCTCTGGGGGAGCACAGCCAAAGTTTAC
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Dd	3850	TTCAATGACTCTGAACCGTAACTGCATCATGAATCTGTGA

RESULT 2  
 ab035698/c  
 TOIG of: ab035698 check: 9874 from: 1 to: 3888

LOCUS	AB035698	3888 bp	mRNA	linear	PRI 18-APR-2000
DEFINITION	Homo sapiens mRNA for Mashpen/NIK-related kinase MINK-1, complete cds.				
ACCESSION	AB035698				
VERSION	AB035698.1	GI:6970477			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
EUKARYOTA;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
MAMMALIA;	Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.				
REFERENCE	1 (sites)				
AUTHORS	Dan,I., Watanabe,N.M., Kobayashi,T., Yamashita-Suzuki,K., Fukagaya,Y., Kajikawa,E., Kimura,W.K., Nakashima,T.M., Matsumoto,K., Nimomiya-Tsuji,J. and Kusumi,A.				
TITLE	Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development				
JOURNAL	FEBS Lett. 469 (1), 19-23 (2000)				
MEDLINE	20175403				
PUBMED	10708748				
REFERENCE	2 (bases 1 to 3888)				
AUTHORS	Dan,I., Watanabe,N.M. and Kusumi,A.				
TITLE	Direct Substitution				
JOURNAL	Organized (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project; 5-11-33 Chiyoada, Naka-ku, Nagoya, Aichi 460-0012, Japan [E-mail:dang@bio.nagoya-u.ac.jp, Tel:81-52-789-2497, Fax:81-52-789-2968]				
FEATURES	Location/Qualifiers				
source	1..3888				
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/chromosome=	"17"				





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Db 2772 CTG-GTATGATCCCTTAATCCAAACATCTGTGAACAGCT-CTTG--CCAGGGGCGCTTTA 2717  
Qy 1191 GGGGCGCA-TAGA--GG-AG-----CA-----GAAGGAGAGC--GGC---G 1223  
Db 2716 CAGGCCACGAGACTGTATGTACCACTCCATCTCTTCAGAGGTG-GCTTTGGCCTTTG 2658  
Qy 1224 C-----CGCTGTAGAGAGCAACAGCGCGGAGCGGAGACAGCGAAGCTGACG--- 1273  
Db 2657 CTGTTCTCG-GTG--GGTG--AGTGGCTG--GCTGAGCA-CTGACG--GCAAGTTTG 2609  
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Db	1441	CAGCAGCAACAGCAGCAGCAGCTTCAGAAACAGCAGCAGCAGAGCTTCCTGCTGGGAC	1500
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Db	2230	CTCTCTCCCTGGGAATTAAGCCACCCGACGACCAACGCTTCAAGGCGACAGCGCGGCCCA	2289

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 2350 ATGACTACTGTCGTCGTCAGAGAGGAGTGAAGAGTGAAGACGACGAGAGAGGC 2409  
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 2410 GAAAGCGGCGGCGAGAGAGAGAGAGATATCCCTGCGGCGCGAGAGAGAGTAA 2469  
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 2890 AACACCCCGGCGGCGAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGTCT 2949  
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 REFERENCE 1 (Siles)  
 Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita-Suzuki, K., Fukagawa, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M., Matsumoto, K., Niimiya-Tanji, J. and Kusumi, A.  
 Molecular cloning of MINK, a novel member of mammalian GCK family kinases, which is up-regulated during postnatal mouse cerebral development  
 JOURNAL FEBS Lett. 469 (1), 19-23 (2000)  
 MEDLINE 20175403  
 PUBMED 10708748  
 REFERENCE 2 (bases 1 to 3888)  
 Dan, I., Watanabe, N.M. and Kusumi, A.  
 Direct Submission  
 Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi 460-0012, Japan (E-mail: dan@bio.nagoya-u.ac.jp, Tel: 81-52-789-2497, Fax: 81-52-789-2966)

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GenCore version 5.1.6  
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Prod. No. is the number of results predicted by chance to have a  
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cde.  
ACCESSION AB035698  
VERSION AB035698.1 GI:6970477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
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REFERENCE 1 (bases) Dan, I., Watanabe, N.M., Kobayashi, T., Yamashita, S., Suzuki, K.,  
Fukagaya, Y., Kajikawa, E., Kimura, W. K., Nakashima, T.M.,  
Matsumoto, K., Minomiyu-Tsujii, J. and Kusumi, A.  
Molecular cloning of MINK, a novel member of mammalian GCK family  
kinases, which is up-regulated during postnatal mouse cerebral  
development  
FEBS Lett. 469 (1), 19-23 (2000)  
MEDLINE 20175403  
PUBMED 10708748  
REFERENCE 2 (bases 1 to 3888)  
AUTHORS Dan, I., Watanabe, N.M. and Kusumi, A.

#### TITLE

JOURNAL

Direct Submission  
Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane  
Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi  
460-0012, Japan (E-mail: dangobio.nagoya-u.ac.jp,  
Tel:81-52-789-2497, Fax:81-52-789-2968)

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QY	1507	AGGAAGCCCTGTATCCATTATGTTGGGGGCGATGAATCCGCTGACAAACCAAGCTGGGGCC	1566
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QY	1687	CCCCCTTCCAGACTCTCTCTATGACAGAGCGGTGAGCCCCCGAGAGGGAACCGCACAA--	1744
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Db	2170	GCTGGCTCACTGAGCGGAACCGCGTGGAGTCT--TCTCCAAAC--GGAACAGCTTCCCTG	2227
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ORGANISM    Homo sapiens
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REFERENCE   1 (bases 1 to 3888)
AUTHORS     Dan,I., Matanabe,N.M. and Kusumi,A.
            Fukagaya,Y., Kajikawa,E., Kimura,W.K., Nakaishima,T.M.,
            Matsumoto,K., Ninomiya-Tsuji,J. and Kusumi,A.
            Molecular Cloning of MINK, a novel member of mammalian GCK family
            kinases, which is up-regulated during postnatal mouse cerebral
            development
JOURNAL     FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE     PubMed 20175403
PUBMED      10708748
REFERENCE   2 (bases 1 to 3888)
AUTHORS     Dan,I., Matanabe,N.M. and Kusumi,A.
            Direct Submission
JOURNAL     Submitted (10-DEC-1999) Ippseita Dan, ERATO, Kusumi Membrane
            Organizer Project; 5-11-33 Chiyo-da, Naka-ku, Nagoya, Aichi
            460-0012, Japan [E-mail:dang@bio.nagoya-u.ac.jp,
            Tel:81-52-789-2497, Fax:81-52-789-2968]
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3333 G-TAG-GG--TTTGGGG-GCCGAG-GCATACCA-CCTCCACGGA--G--CTC-TTGAAGGC 3286
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2858 CTC-----A-C--GT-----C-G-TACTG---CAGCTG---GTGGAG 2832
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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

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(without alignments)  
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Searched: 1 segs, 3888 residues

Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0

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Listing first 45 summaries

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-FGAPEXT=0 -YGAPOP=0.1 -YGAPEXT=0 -DELOP=0.1 -DELEXT=0

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ALIGNMENTS

RESULT 1

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TOIG of: ab035698 check: 9874 from: 1 to: 3888

AUTHORS Dan, I., Watanabe, N.M., Kobayashi, T., Yamaehta-Suzuki, K.,  
Pukagaya, Y., Kajikawa, E., Kimura, W.K., Nakashima, T.M.,  
Matsumoto, K., Nimomiya-Tsuji, J., and Kusumi, A.

TITLE Molecular cloning of MINK, a novel member of mammalian GCK family

kinases, which is up-regulated during postnatal mouse cerebral

development

JOURNAL FEBS Lett. 469 (1), 19-23 (2000)

MEDLINE 20175403

PUBMED 10708748

REFERENCE 2 (bases 1 to 3888)

AUTHORS Dan, I., Watanabe, N.M. and Kusumi, A.

TITLE Direct Submission

JOURNAL Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane

Organizer Project: 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi

460-0012, Japan (E-mail: dangb@bio.nagoya-u.ac.jp,  
Tel:81-52-789-2497, Fax:81-52-789-2968)

FEATURES

source

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1. 3888

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/note="Human MINK is a conceptually translated protein

using mouse MINK sequence and the human genomic clone

hRPK17\_H\_5 from chromosome 17. Human and mouse MINK

shares 97% amino acid sequence identity and all 32

exon/intron boundaries in CDS matched consensus sequences

for splicing."

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ORIGIN

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ab035698

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Best Local Similarity: 92.65%

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Length: 3888

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Gaps: 1



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 / REFERENCE  
 / Dan, I., Macanabe, N. M., Kobayashi, T., Yamashita-Suzuki, K.,  
 / Fukagawa, Y., Kajikawa, E., Kimura, W. K., Nakashima, T. M.,  
 / Matsumoto, K., Niimiya-Tsuji, J., and Kusumi, A.  
 / Molecular cloning of MINK, a novel member of mammalian GCK family  
 / kinases, which is up-regulated during postnatal mouse cerebral  
 / development

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JOURNAL      FEBS Lett. 469 (1), 19-23 (2000)
MEDLINE      20175403
PUBMED       10708748
REFERENCE    2 (bases 1 to 3888)
AUTHORS      Dan, I., Watanabe, N.M. and Kusumi, A.
TITLE        Direct Submersion
JOURNAL      Submitted (10-DEC-1999) Ippelita Dan, ERATO, Kusumi Membrane
              Organizer Project; 5-11-33 Chiyoda, Naka-ku, Nagoya, Aichi
              460-0012, Japan (E-mail: dang@bio.nagoya-u.ac.jp,
              Tel: 81-52-789-2497, Fax: 81-52-789-2368)
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25 e-GLuLeuValGluValAlaGlyAsn-Gly-----ThrTyrGly-----GI 38
3861 CAGAGTC-AT-GAAGTA-----AACTGGCTGCTGCCCCAGAGC--GAGCTAGGCA 3813
QY
38 n-----Val-TyrIleGlyArg-HisValIleThrGlyGlnLeu-Ala-----A1 52
3812 AAAAACACCTTGTCACTT-----GGCTCAC-----ACAGAAC-TTGAGCTCTGACG 3766
QY
52 a-IleIleVal-Met--Asp---ValIleGluAspGluGluIle---LysGln 69
3765 TCGTTT--GTGATAGAACCCCGCTC-----GAGTGGCCCT-- 3730
QY
69 IuileAsnMetLeuIleValTyrSerHisArgAsn-IleAlaThrTyrGlyAla 88
3729 -----CTC-----CACAGAG--GATC--TCAT--GGCT-- 3705
QY
88 aPheIleIleValSerProProGlyAsnAspAspGln--Leu--TPrLeuValMetGI 106
3704 -TTT-----TCACCC-----CAGCCCATTACTGTGTTG-----GA 3676
QY
106 uPhe--Cys-GlyAlaGlySerValThrAspLeuValIleAsnThrIleGly----- 122
3675 GCA-GATGTAGGCC-----ACAGAA--GTA-----GGCATCTCCC 3643
QY
123 -Asn-----Ala-----LeuIleGluAsp--CysIleAla--TyrIleCys--ArgGI 136
3642 CCACGTGACGACACCATCTT-----AATGATGC--GCCGTAGC--TGTTGAGCT-- 3596
QY
136 uIleLeuArgGlyLeuAlaHis-----Leu-----His-Ala-HisIleValIleHis- 151
3595 -----AGA-----CACCTGCTCTCTGTAGCAGAGCAT-----CTCCAG 3558
QY
152 -ArgAspIleIleValGlnAsnValLeuLeuThrGlnAsnAlaGluValIleValAs 171
3557 CCGTGC-----GTG-----TTGGG-GAG-----GAA-----GA 3536
QY
171 pPhe-----GlyVal-Ser-AlaGlnLeuAspArgThrValGlyArgAsnThrP 188
3535 TGA-TGGCATGGGGGTATCTGGCT--CTGAT-----GTGC-----ACA- 3498
QY
188 heIleGlyThrProTyrTrpMetAlaProGluValIleAlaCysAspGluAsnProAspA 208
3497 -----GGG-----ATGT--A--GATGATATAGC--TGTT-----CCC-- 3472
QY
208 IaThrTyrAspIleArgSer-AspIle-----Trp-----SerLeuGlyIleThr-- 222
3471 -----CGAGT--CGACATCCACAGCATGAAAGCCAGC-----ACTGGA 3436
QY
223 AlaIleGluMetAla--GluGly--AlaProProLeu-CysAspMetHis-----Prom 239
3435 GCCATAG--ATACCTTGAGCC--GGCGCCCTCTCTACTGT-----CAGTCCAGCCAG 3385
QY
239 eCArg-----Ala-----Leu-----Phe-----L 244
3384 C-AGAGGCGGTGGGGGAGAGTGGGAGCAAGACTGAGCCATGATTTGTGTAGGGTT 3326
QY
244 euIle--ProArgAsnPro-PropProArgLeuIleSerIleValTrpSerIleValPheI 263
3325 TGGG-GGCCAGCAGCATAC-ACCTCCAGG-----AGC-----TCTT----- 3292
QY
263 IaSpPheIleAsp--ThrCys--LeuIleValThrTyrLeuSer----- 276
3291 --GAGG--GC-GATGACAG--GAATTAATCCGCTCGTATT--TCACAAACAGGTAGTGC 3240
QY
277 -Arg-----Pro-----ProThrGln--Gln--LeuLeuIlePhe-Pro-Phe-- 288
3239 CCGACAGCCTCATGTCCTCCACAGGT--GGTCCAGCCCTGCTTC--TTCTCCACTTCTGGG 3183
QY
289 --IleArgAspGln-----ProThrGln--Arg-GlnValArgIleGlnLeuVal 304
3182 TCATTG--TG-CAGATCTTGTTCG--GAGCCAGGACAGGTA--ATA----- 3142
DB

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Oy 304 apHieIleapHysereArglyLyArgGlyGluLysGluGluThrGluTyrGluTyrS 324
Db 3141 ---CACC-----CGCAGTT---TG-----TTCC---TTTT 3121
Oy 324 ergLySerGluGluGluLeuAaspSerHieGlyGluGlu---Gly---Glu---ProSerSerile 342
Db 3120 CCCT---GA-----GAT-----GGTGAATGACAGGTTGAGCCCTCCACACA--- 3083
Oy 343 MetAenValProGlyGluSerThrLeu---ArgArgGluPheLeuArgLeuGlnGln 361
Db 3082 ---CAI---CCA-----TCTG---CTGGAAGCCTCC-----CGCC---CAAT---GA 3050
Oy 361 uAenLySerAen---SerGluAalaLeuLysGlnGlnGlnLeu-----GlnGlnGln 379
Db 3049 G-----TCAT---ACAACCTT---GCCCTGCC---CA-----CTTCGGTCCAGCAACATC 3009
Oy 379 InGluArgAap---ProGluAalaHieLysHieLysLeuLeuHieGln---Arg-----G1 395
Db 3008 AGCC---CGTTC---TCCGT---GCC-----CACACAGAGGTTGACCCCCCA 2971
Oy 395 nArg-----ArgIle---GluGluGlnLysGluGluArg-----Arg--- 406
Db 2970 AAGGCTGCACAGAGGATCTCGAGATT-----GAAT---CGCTTCTTACTTCGCGAT 2920
Oy 407 ---Arg-ValGluGlnGlnGln-----Arg-----Arg----- 414
Db 2919 CTCAGAGGCTCT-----CAGCTGGGCCCGGGGTTGGTGGAGATTCACGTTGACCACA 2868
Oy 415 Glu-----ArgGluGlnArgLysLeuGln-----GluLysGlu-----G1 426
Db 2867 GAACCTTCCTCAGCT-----CGTA---CTGACGCTGTCGAGCC---GATGGCCCTCTCA 2817
Oy 426 n-Gln-ArgArgLeuGluAap---Met-----GlnAala---LeuArgArgGluGlu 441
Db 2816 CCCACTAGAGG---CTGT---GATGGGATGCTGTGCCACATG---CTTCC---AGGC---TG---GT- 2768
Oy 442 Arg-----Arg-----GlnAalaGluArgGluGlnGluTyrLysArgLys-----Gln--- 455
Db 2767 AGATCCCTAGATCCACAAACAT---CGTGA-----CGAAC---TCTGCCAGGGG 2723
Oy 456 ---LeuGluGluGln-----Arg-----GlnSerGlu-----Arg----- 464
Db 2722 CCTTAC-----CAGCCACGAGACTGTAATCACACATCCA---TCTTCGAGGGGGG 2669
Oy 465 -----LeuGln---Arg-----Gln-----LeuGlnGlnLysHie---Al 474
Db 2668 TTTCGCTTTGCTGTT---CTCGGTGGGTGAGTGGCTGGCTG-----GACACGTCAGGC 2616
Oy 474 a-----Tyr-----LeuLysSerLeuGlnGlnGlnGlnGlnGln----- 487
Db 2615 AGGTTGTGTACCCATG-----CTGT-----CAGCATG---CAGCAGGTTCCGCTC 2572
Oy 488 ---LeuGlnLysGlnGlnGlnGlnGln-----LeuLeuPro-----GlyAaspArgLysPr 503
Db 2571 CTCTT-----CAGGGGTGGCTGGA---CAACACATGTGTC---CGCCC---CC 2533
Oy 503 oLeuTyrHieLysGly-----ArgGlyMetAen---ProAalaAap---Lys---Pro 517
Db 2532 G-----TATGGGGCTGGGTCCCGGT-----GATCTCTTC---GAGCTGTCGACCA 2489
Oy 518 AlaTyr-Ala---ArgGluValGluGlu-----ArgThrArgMetAenLysGlnGln--- 533
Db 2488 CCATGTGTGACGCT---GTCTG---TA---TCCCATGTCTG---CGGCC---CC---CAGGG 2442
Oy 534 -----Asn---SerPro-----LeuAalaLysSerLysProGlySerThrGlyProGluProPr 550
Db 2441 GATATCTGCTCCCTCTGCTGCTGCGC-----CCT---TCG-----CCTT---CTTCC 2400
Oy 550 o-Ile---ProGln---AlaSerProGlyProGlyProLeu-----SerGlnThrPro 566
Db 2399 TCGTGTCTCTACCTCTT---CCA---CTCTCTC---G---CTGACGACAGAGT---AGTCCA 2351
Oy 567 ---Pro-Met-Gln-----Arg---Pro-Val---Glu-Pro-----GlnGluGlyProHie 579

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Db 2350 TGGCTTCTTGGAGCCGAGGGGCTGTCTCAGAGTCCGCTTTCACAA-----CA 2297
Oy 579 s-LysSer-----LeuGlnAapGlnPro-----Thr-ArgAenLeuAala 592
Db 2296 CAATGTCTGGGCGCGGCTGTG-----CCGTAGCGGTGTGTCTGCGGGC---TTGGCTT 2246
Oy 592 la-PheProAlaSer-----His---Aap---Pro-----Aap---Pro-Ala11 603
Db 2245 T-ATTCACAGC---GG---AGACACAGGAGACTGTCTCGTTTGAGAGACTCCACAGCGGT 2189
Oy 603 eProAlaProThr---AlaThrProSer-----AlaArg-----Gly-Ala1y 616
Db 2188 TCCGCT---CCAGT---GAGCCAG---CTTG---GGAGCTCCCTGAGAGCTGAGAGACGCTG 2133
Oy 616 a11eArg-----GlnAenSerAapPro-----ThrSer-Glu----- 626
Db 2132 TC-----CGAGCCTTCCAG-----CCAGGCTGCTCTCTGATGAGTCCGGGTTACTG 2085
Oy 627 ---Gly---ProGly-----ProSer---ProAenPro---ProAlaTyr-Val-ArgPro--- 640
Db 2084 GCACGAGCTGCTGGGCTGGCCGGG---ACCTT---CCGGCCCCAC---TGTGTTAAGGCACT 2029
Oy 641 ---Aap-AenGluAalaPro-----ProLys-Val---Pro----- 649
Db 2028 GGCATATAGTAGT---CTCTGAGGACCTTG---GGTGGGCTCGTTATCTGGCGGAGC 1971
Oy 650 Gln-----ArgThr-Ser-----Ser-Ile---Ala- 656
Db 1970 CAGCTGGGAGATTCGGGCTGGGCGCAGAGTCTTCACAGAGTGAGGCTGTAATTGCGCG 1911
Oy 657 ---ThrAala-LeuAen---Thr-----SerGly-----AlaGly---GlySe 667
Db 1910 ATGACAGCTCTCTCGG---GCATCGGCGTGCACTGTGGCGGAGTGCAGAGGCTCGCGCTC 1852
Oy 667 r-----ArgPro-----Ala---GlnAalaVal-Arg-----AlaArg-Pro-AerSerAen 680
Db 1851 ATGGAGAGCT---GGAGAGCAGCCAG---GTTTCGGGTGGGCTGAG---TCTTCAGG---GAC 1800
Oy 681 SerAlaTyr-----GlnIle-----Tyr-LeuGlnArgArgAalaGluArglyT 695
Db 1799 ---TGGATTCGGGATTCAGAGTGTGCAATATGCTTCAGTG-----GGA- 1760
Oy 695 hrProLysProProGly---ProPro-----AlaGln-ProProGly---ProPro 709
Db 1759 -----CCCGGTGTCACCCAGGCTCTTGTGCGGT---CCCTCTGGGGCTTCACCG 1712
Oy 710 AsnAlaSerSerAenProAapLeu---ArgArgSer-----Aap-----ProGly----- 723
Db 1711 G-----CCT---CTGCATAGAGAGTCTGGGAAAGGGCTCTGGGGGCC 1669
Oy 724 TrpGluArgSer-----Aap-----Ser-----ValLeuPro-Ala---Ser---H 735
Db 1668 TGGGG---AGGCC---TGGGGGATGGGGGGGCTCAGAGCCCCGGTGTGCTGTGTGGCC 1611
Oy 735 isGly-----His-----LeuPro-----GlnAala 741
Db 1610 AAGGAGAGTCTGTGCTGTGTTATCTTGTCTCTTCTTACCTTCGGGCCACAGCT 1551
Oy 742 GlySerLeu-GluArgAen-----Arg-----Val---GlyAlaSer---Ser--- 753
Db 1550 GGT---TTGTACGCGGAGTTACATGCCCCGACCATATAGTACAGGGGCTCTCTGTCCCA 1494
Oy 754 ---Lys-----LeuAapSer-Ser-----ProVal-LeuSerProGly 764
Db 1493 GGCAGAGACTGTGCTGTGCTGTT---TCTGAAGCTGCTGCTGTCTGTCTGT- 1442
Oy 765 AenLysAala---LysProAap---Aap---His-----A 773
Db 1441 -----GCTGACAG---GACTTGAAGTAGAGCATGTCTGTGTCAGCTGCTTCGAGAC 1391
Oy 773 rgsr-----Arg-----ProGlyArgProAlaAapPhe-----Val---LeuLeuLysG 787

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